

# Army Suicide Surveillance Data Update

## DoD/VA Suicide Prevention Conference



**ARMY INSTITUTE OF PUBLIC HEALTH**

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## Briefing Outline

**PURPOSE:** To provide a summary of surveillance data on US Army suicides.

- Overview of data sources and methods
- Suicide rate trends 2001 – 2011
- Overview of suicide risk factor data
- Summary of data on nonfatal suicidal behavior

## Behavioral and Social Health Outcomes Program

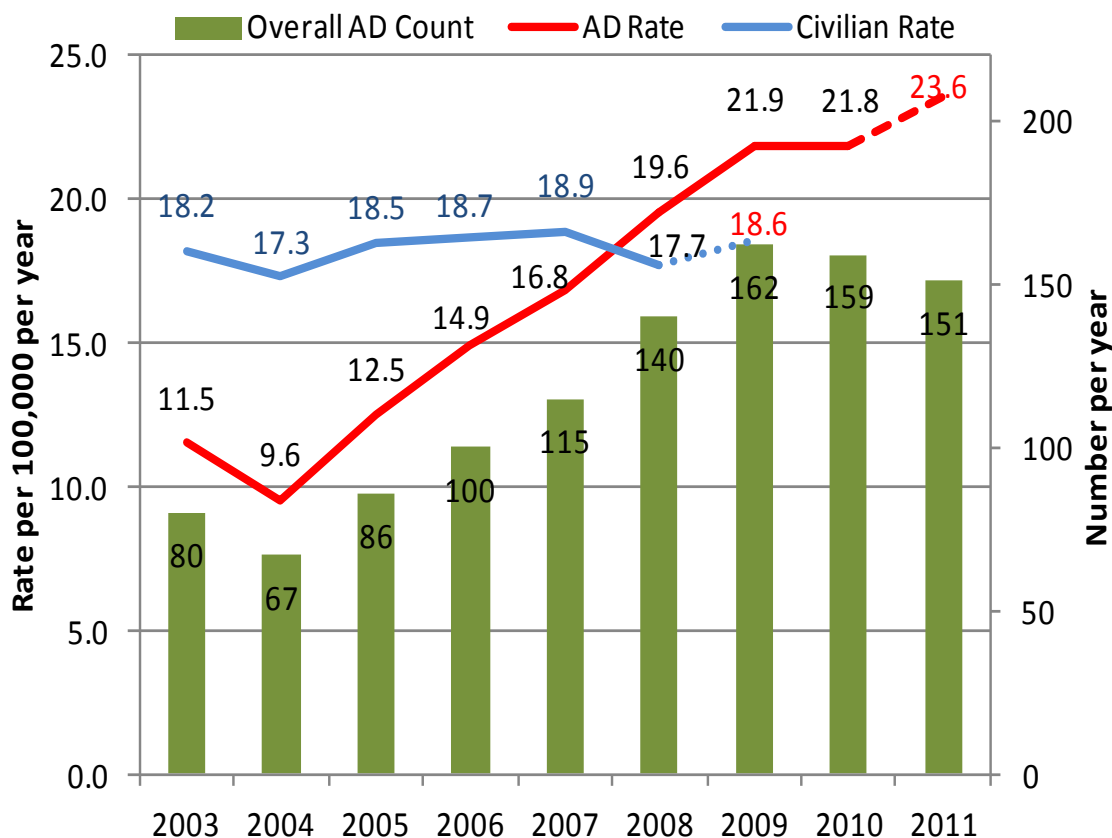
- In 2008, the Behavioral and Social Health Outcomes Program (BSHOP) was established at US Army Public Health Command.
- BSHOP's mission is to apply the Public Health process to behavioral health issues by
  - Conducting *systematic surveillance and in-depth analysis* of suicide and other behavioral health outcomes
  - Deploying *behavioral health epidemiological consultation* (EPICON) teams to evaluate and characterize outcomes through population-based studies
  - *Disseminating information* regarding behavioral health threats and providing the basis for preventive action and future research in the areas of behavioral and social outcomes.

## Suicide Surveillance

- In late 2008, BSHOP began development of the Army Behavioral Health Integrated Data Environment.
- The ABHIDE includes a registry of all Army suicides and suicidal behaviors, as well as a compilation of relevant data from 2001 forward, and is in the process of acquiring comparison populations.
  - Data from a variety of Army and Department of Defense sources have been integrated into the ABHIDE.
  - Ongoing confirmation of suicide deaths obtained from the Armed Forces Medical Examiner System (AFMES).
- ABHIDE data supports analysis and reporting on suicidal behavior to DA organizations and installation/medical command stakeholders.

## Comparison of US Army Suicides and US Population Suicides

**Figure A. Counts and rates by year of suicide, 2001–2011**

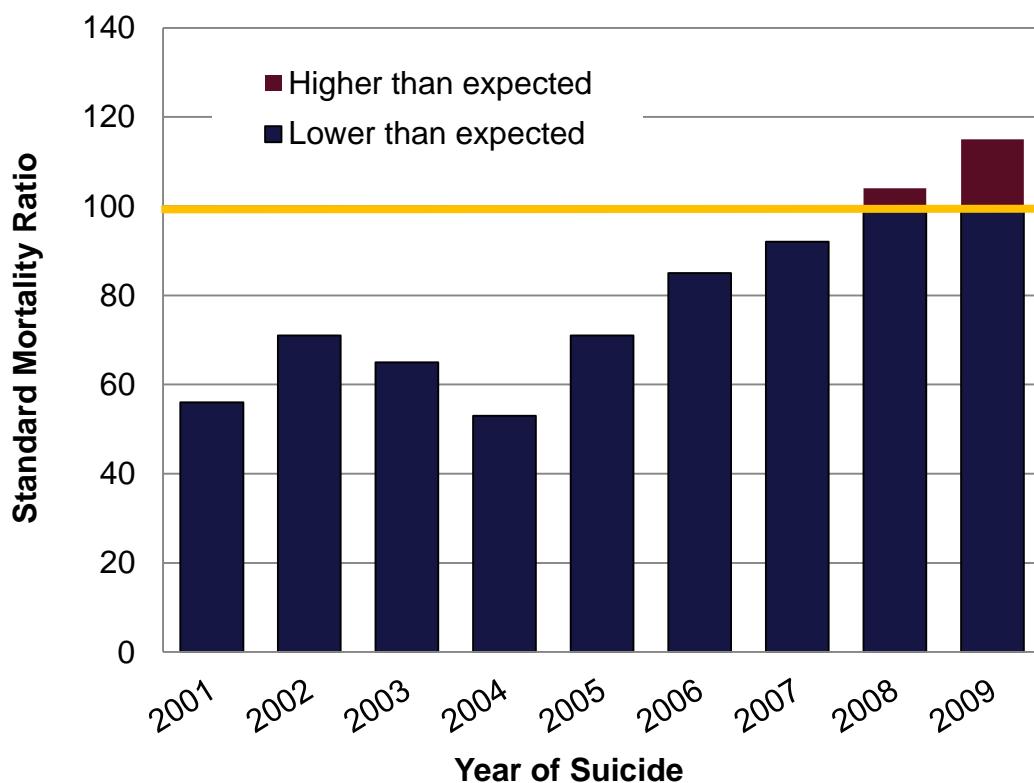


- The suicide rate among US Army active-duty Soldiers has increased steadily since 2005.
- In 2008, the Army suicide rate surpassed the US Population rate.

Data source: AIPH Suicide Surveillance Reports

## Comparison of US Army Suicides and US Population Suicides

**Figure B. Standardized mortality ratio (SMR)  
by year of suicide, 2001–2009**



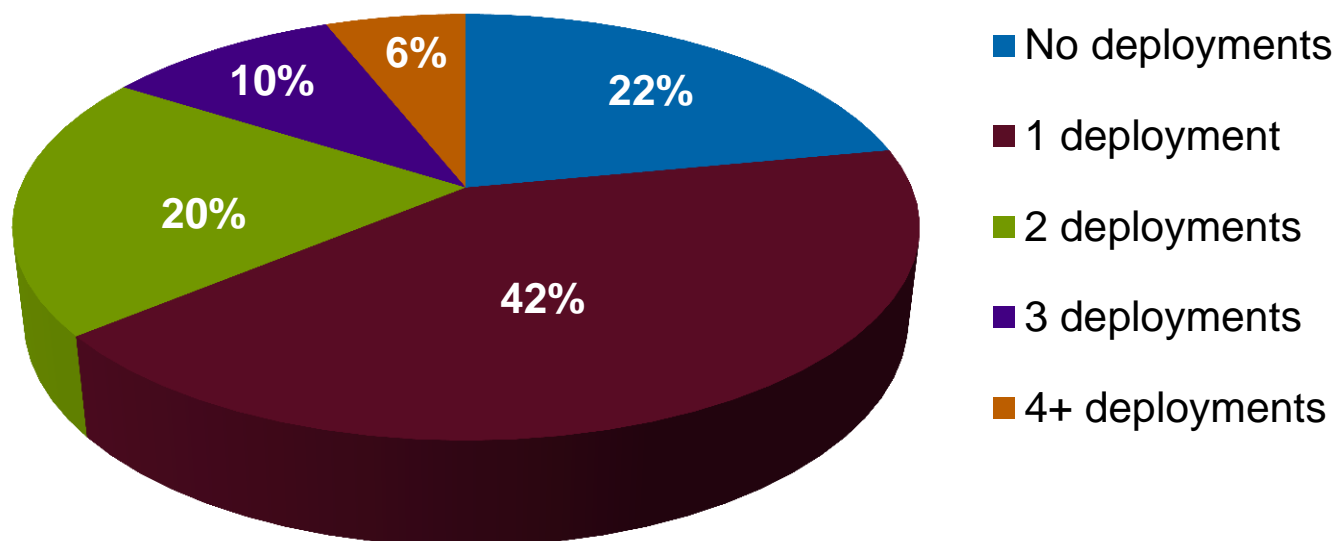
- Accounting for differences in age, gender, and race-ethnicity between the two populations, the US Army began experiencing higher than expected numbers of suicides in 2008.

Data source: AIPH Suicide Surveillance Reports

## US Army Suicides: Deployment History

The largest proportion of suicides were by Soldiers with one deployment, followed by those who never deployed.

**Figure C. Lifetime deployment history of suicide cases, 2001– 2011**



## US Army Suicides: Deployment History

- Increases in total number of deployments among suicides may reflect increases in total number of deployments among Soldiers, rather than risk associated with suicide.
- However, Soldiers with one previous deployment are at greater risk for suicide than those who have never deployed and those with 2+ prior deployments, but this is limited by lack of data on Soldiers who leave service following deployment.

**Table 2. Association of suicide among deployed and non-deployed US Army Soldiers (N = 5196)**

|                          | AOR <sup>a</sup> (95% CI) |
|--------------------------|---------------------------|
| <b>Deployment Status</b> |                           |
| Never Deployed           | 1.00                      |
| Deployed                 | 1.23* (1.01–1.51)         |
| <b>Total Deployments</b> |                           |
| 0                        | 1.00                      |
| 1                        | 1.29* (1.05–1.59)         |
| 2 or more                | 1.07 (0.81–1.40)          |

Legend: AOR – adjusted odds ratio

Notes: <sup>a</sup> Adjusting for the matched factors and confounders (race, marital status and any BH Dx).

\* significant ( $p \leq 0.05$ ).



## **US Army Suicide Cases: Behavioral Health Disorders, 2001–2011**

- 47% of Army Soldiers who died by suicide received at least one behavioral health diagnosis (BH) in their military medical record; 27% received more than one diagnosis:
  - Adjustment (29%), Mood (23%), and Substance (21%) Disorders were the most common diagnoses.
  - PTSD was diagnosed in 9%.
- Only 7% had medical documentation of prior self-harm or a previous suicide attempt.
- These findings are consistent with known risk factors for suicide, but highlight the fact that over half of the Soldiers who died by suicide did not have evidence of a BH condition in their medical record.

## Table 3. Suicide Attempts versus Suicides

| Characteristics - n (%)      | Suicide Attempt<br>Cases | Suicide<br>Cases        |
|------------------------------|--------------------------|-------------------------|
|                              | 2004–2010<br>(N = 4509)  | 2001–2011<br>(N = 1204) |
| <b>SUBSTANCE INVOLVEMENT</b> |                          |                         |
| Event Involved Alcohol       | 1057 (23)                | 193 (21)                |
| Event Involved Drugs         | 2287 (51)                | 80 (9)                  |
| <b>STRESSORS<sup>a</sup></b> |                          |                         |
| Relationship Problem         | 2076 (46)                | 468 (51)                |
| Work Stress                  | 1734 (38)                | 259 (28)                |
| Physical Health Problem      | 850 (19)                 | 173 (19)                |
| Victim of Abuse              | 1344 (30)                | 98 (11)                 |
| Family/Friend Death          | 1169 (26)                | 115 (12)                |
| Perpetrator of Abuse         | 319 (7)                  | 100 (11)                |
| Financial Stress             | 474 (11)                 | 80 (9)                  |

Note: <sup>a</sup> May have more than one.

- Drugs, whether or not as the method, are more likely to be involved in attempts than suicides.
- Soldiers who attempt suicide are more likely to have evidence of being a victim of abuse and to have experienced recent death of a close family member or friend.

Data source: AIPH Suicide Surveillance Reports



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Questions?